Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for single-step subscriber logon to a differentiated data communications network including a first domain and a second domain, said method comprising:

    communicating, ~~via~~ by a network interface, ~~with~~ between the network interface and a host, wherein said communicating comprises a transport of multi-protocol data packets over a point-to-point communication link between the host and the network interface;

    identifying a source address for the host; and

    authorizing the host to access said first domain and said second domain based upon login information obtained from the host.

2. (Previously Presented) The method of claim 1 further comprising:

    authenticating said subscriber based upon login information obtained from the host.

3. (Previously Presented) The method of claim 2 wherein said authenticating is accomplished using Link Control Protocol (LCP).

4. (Previously Presented) The method of claim 1 wherein said identifying is accomplished using Internet Protocol Control Protocol (IPCP).

5. (Previously Presented) The method of claim 1 wherein said identifying further comprises:

assigning an Internet Protocol address to the host from a pool of addresses located in a

memory.

6. (Previously Presented) The method of claim 1 wherein said identifying further comprises:

assigning an Internet Protocol address to the host from an authentication reply packet

received from an authentication server.

7. (Previously Presented) The method of claim 1 wherein said communicating is accomplished

using Point-to-Point Protocol (PPP).

8. (Previously Presented) The method of claim 1 wherein said authorizing further comprises:

writing said login information into a memory.

9. (Currently Amended) A method for single-step subscriber logon to a differentiated data

communications network including a first domain and a second domain, said method

comprising:

authenticating in a network interface a host based upon login information obtained from the

host;

communicating, via by the network interface, with between the network interface and the

host, wherein said communicating comprises a transport of multi-protocol data packets

over a point-to-point link existing between the host and the network interface;

identifying a source address for the host;

writing said login information into a memory; and

authorizing the host to access said first domain and said second domain based upon said

login information.

10. (Currently Amended) A method for single-step subscriber logon to a differentiated data

communication network including same-session access capabilities to a first domain and a

second domain, said method comprising:

communicating ~~via~~ between a network interface ~~with~~ and a host, wherein said

communicating comprises a transport of multi-protocol data packets over a point-to-

point communication link between the host and the network interface;

identifying a source address for the host; and

authorizing the host to access said first domain and said second domain based upon login

information obtained from the host.

11. (Previously Presented) The method of claim 10 further comprising:

authenticating the host based upon login information obtained from the host.

12. (Previously Presented) The method of claim 11 wherein said authenticating is accomplished

using Link Control Protocol (LCP).

13. (Previously Presented) The method of claim 10 wherein said identifying is accomplished

using Internet Protocol Control Protocol (IPCP).

14. (Previously Presented) The method of claim 10 wherein said identifying further comprises:

assigning an Internet Protocol address to the host from a pool of addresses located in a memory.

15. (Previously Presented) The method of claim 10 wherein said identifying further comprises: assigning an Internet Protocol address to the host from an authentication reply packet received from an authentication server.

16. (Previously Presented) The method of claim 10 wherein said communicating is accomplished using Point-to-Point Protocol (PPP).

17. (Previously Presented) The method of claim 10 wherein said authorizing further comprises: writing said login information into a memory.

18. (Currently Amended) A method for single-step subscriber logon to a differentiated data communication network including same-session access capabilities to a first domain and a second domain, said method comprising:

authenticating a host based upon login information obtained from the host;

communicating, ~~via~~ by the network interface, ~~with~~ between the network interface and the host, wherein said communicating comprises a transport of multi-protocol data packets over a point-to-point link existing between the host and the network interface;

identifying a source address for the host;

writing said login information into a memory; and

authorizing the host to access said first domain and said second domain based upon said login information.

19. (Currently Amended) A method for single-step subscriber logon of a host to a differentiated data communication network having access to a first domain and a second domain comprising:

receiving login information from said host;

authenticating said host based upon said login information;

storing said login information in a memory;

notifying said host once a successful authentication process has been completed;

initiating an address allocation negotiation session;

assigning a source address to said host;

communicating, ~~via~~ by a network interface, ~~with~~ between the network interface and said host, wherein said communicating comprises a transport of multi-protocol data packets over a point-to-point link existing between said host and said network interface; and

writing a subscriber-related entry into the memory based upon said source address and said login information.

20. (Previously Presented) The method of claim 19 wherein said authenticating further comprises:

processing an authentication request packet based upon said login information;

sending said authentication request packet to an authentication memory bank; and

receiving a reply packet from said authentication memory bank.

21. (Previously Presented) The method of claim 20 wherein said sending further comprises:

    sending said authentication request packet via a Remote Access Dial-In User Service

    (RADIUS) protocol communication link.

22. (Previously Presented) The method of claim 20 wherein said writing further comprises:

    writing said subscriber-related entry into the memory based upon configuration information

    in said reply packet from said authentication memory bank.

23. (Previously Presented) The method of claim 19 wherein said login information comprises a

    user name and a user authenticator.

24. (Previously Presented) The method of claim 19 wherein said receiving further comprises:

    receiving login information using a Link Central Protocol (LCP) communication link.

25. (Previously Presented) The method of claim 19 wherein said initiating further comprises:

    utilizing an Internet Protocol Control Protocol (IPCP) communication link.

26. (Previously Presented) The method of claim 19 wherein said assigning further comprises:

    retrieving a subscriber Internet Protocol address from a pool of addresses located in the

    memory.

27. (Previously Presented) The method of claim 19 wherein said assigning further comprises:

retrieving a subscriber Internet Protocol address from an access accept reply packet received

from an authentication server.

28. (Previously Presented) The method of claim 19 wherein said communicating further

comprises:

utilizing a Point-to-Point Protocol session between said host and said network interface.

29. (Previously Presented) An apparatus for single step logon of a host to a differentiated data

communication network having the capacity to create same-session open channels to a first

domain and a second domain, the apparatus comprising:

means for communicating via a network interface with a host, wherein said communicating

comprises a transport of multi-protocol data packets over a point-to-point

communication link existing between the host and the network interface;

means for identifying a source address for the host; and

means for authorizing the host to access said first domain and said second domain based

upon login information obtained from the host.

30. (Previously Presented) The apparatus of claim 29 further comprising:

means for authenticating the host based upon login information obtained from the host.

31. (Previously Presented) The apparatus of claim 29 wherein said means for communicating

further comprises:

means for communicating between the host and the network interface using a Point-to-Point Protocol session.

32. (Previously Presented) The apparatus of claim 29 wherein said means for authorizing further comprises:

means for writing said login information into a memory.

33. (Currently Amended) An apparatus for single-step subscriber logon of a host to a differentiated data communication network having access to a first domain and a second domain comprising:

means for receiving login information from said host;

means for authenticating said host based upon said login information;

means for storing said login information in a memory;

means for notifying said host once a successful authentication process has been completed;

means for initiating an address allocation negotiation session;

means for assigning a source address to said host;

means for communicating, ~~via~~ by a network interface, ~~with~~ between the network interface and said host, wherein said communicating comprises a transport of multi-protocol data packets over a point-to-point link existing between said host and said network interface; and

means for writing a subscriber-related entry into the memory based upon said source address and said login information.

34. (Currently Amended) A program storage device readable by a machine, tangibly

embodying a program of instructions executable by the machine to perform a method for

single-step subscriber logon to a differentiated data communications network including a

first domain and a second domain, said method comprising:

communicating, ~~via~~ by a network interface, ~~with~~ <u>between the network interface and</u> a host,

wherein said communicating comprises a transport of multi-protocol data packets over a

point-to-point communication link between the host and the network interface;

identifying a source address for the host; and

authorizing the host to access said first domain and said second domain based upon login

information obtained from the host.

35. (Previously Presented) The program storage device of claim 34 wherein said method further

comprises:

authenticating the host based upon login information obtained from the host.

36. (Previously Presented) The program storage device of claim 34 wherein said authorizing

further comprises:

writing said login information into a memory.

37. (Currently Amended) A program storage device readable by a machine, tangibly

embodying a program of instructions executable by the machine to perform a method for

single-step subscriber logon to a differentiated data communication network including

secure simultaneous access capabilities to a first domain and a second domain, said method

comprising:

communicating, ~~via~~ by a network interface, ~~with~~ between the network interface and a host,

wherein said communicating comprises a transport of multi-protocol data packets over a

point-to-point communication link between the host and the network interface;

identifying a source address for the host; and

authorizing the host to access said first domain and said second domain based upon login

information obtained from the host.

38. (Previously Presented) The program storage device of claim 37 wherein said method

further comprises:

authenticating the host based upon login information obtained from the host.

39. (Previously Presented) The program storage device of claim 37 wherein said method

further comprises:

writing said login information into a memory.

40. (Previously Presented) A gateway for single-step subscriber logon of a host to a

differentiated data communication network having access to a first domain and a second

domain, the gateway comprising:

a multi-protocol point-to-point link device for establishing a communication link for the

transport of multi-protocol data packets between the host and the gateway;

a source address device for obtaining a source address for the host; and

an authentication processor for authorizing the host to access the first domain and the second

domain based upon login information obtained from the host.

41. (Previously Presented) The gateway as defined in claim 40, wherein the authentication

processor authenticates the host based upon the login information.

42. (Previously Presented) An apparatus for single-step subscriber logon of a host to a

differentiated data communication network having access to a first domain and a second

domain, the apparatus comprising:

a multi-protocol point-to-point link device in communication with the host for establishing a

communication link;

a source address device in communication with the host for negotiating a dynamic Internet

Protocol (IP) address; and

an authentication processor for authorizing the host to access the first domain and the second

domain based upon login information obtained from the host.

43. (Previously Presented)   The apparatus as defined in claim 42, wherein the authentication

processor receives the login information from the host and authenticates the host.

44. (Previously Presented)   The apparatus as defined in claim 42, further comprising a notifier

in communication with the authentication processor and the host for notifying the host of an

authentication status.

45. (Previously Presented) The apparatus as defined in claim 42, further comprising a registration memory in communication with the authentication processor and the source address device for tabulating the login information and the dynamic IP address.

46. (Previously Presented) The gateway as defined in claim 40, further comprising a notification device in communication with the authentication processor and the host for sending the host an authentication status.

47. (Previously Presented) The gateway as defined in claim 40, further comprising a registration memory in communication with the authentication processor and the source address device for tabulating the login information and the source address.

48. (Currently Amended) An apparatus for single-step subscriber logon to a differentiated data communications network including a first domain and a second domain, the apparatus comprising:

    means for communicating, ~~via~~ by a network interface, ~~with~~ <u>between the network interface and</u> a host, wherein the communicating comprises a transport of multi-protocol data packets over a point-to-point communication link between the host and the network interface;

    means for identifying a source address for the host; and

    means for authorizing the host to access the first domain and the second domain based upon login information obtained from the host.

49. (Previously Presented)   The apparatus as defined in claim 48, further comprising means for authenticating the host based upon login information obtained from the host.

50. (Previously Presented)   The apparatus as defined in claim 48, wherein the means for identifying further comprises means for assigning an Internet Protocol address to the host from a pool of addresses located in a memory.

51. (Previously Presented)   The apparatus as defined in claim 48, wherein the means for identifying further comprises means for assigning an Internet Protocol address to the host from an authentication reply packet received from an authentication server.

52. (Currently Amended)   A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for single-step subscriber logon of a host to a differentiated data communication network having access to a first domain and a second domain, the method comprising:

receiving login information from the host;

authenticating the host based upon the login information;

storing the login information in a memory;

notifying the host once a successful authentication process has been completed;

initiating an address allocation negotiation session;

assigning a source address to the host;

communicating, ~~via~~ by a network interface, ~~with~~ between the network interface and the host, wherein the communicating comprises a transport of multi-protocol data packets over a point-to-point link existing between the host and the network interface; and

writing a subscriber-related entry into the memory based upon the source address and the login information.

53. (Previously Presented)   The program storage device as defined in claim 52, wherein the authenticating further comprises:

processing an authentication request packet based upon the login information;

sending the authentication request packet to an authentication memory bank; and

receiving a reply packet from the authentication memory bank.

54. (Previously Presented)   The program storage device as defined in claim 52, wherein the assigning further comprises:

retrieving a subscriber Internet Protocol address from a pool of addresses located in the memory.

55. (Previously Presented)   The program storage device as defined in claim 52, wherein the assigning further comprises:

retrieving a subscriber Internet Protocol address from an access accept reply packet received from an authentication server.